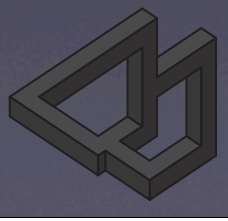
Convergence and VoIP

Patrik Fältström

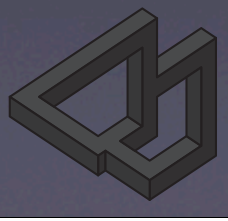
Cisco Systems



What am I doing?

- Employed by Cisco Systems
- Member of the Internet Architecture Board
- Member of the Swedish Government IT Policy and Strategy Group
- Owner/Founder of Frobbit AB

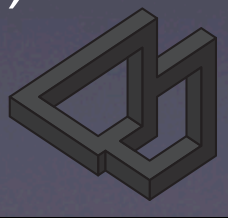
Cisco Systems



What was "ICT" 1990?

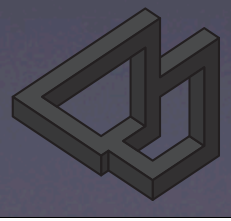
- We had an incumbent (Televerket)
- We had one challenger (Comvik)
- Governments trusted OSI and X.400
- Televerket refused to look at packet based networks, even though we had customers for the first ISP (that ended up being Swipnet)

Cisco Systems



Evolution

Phase	Data application	Telephony
Transport	SNA to IP	TDM to IP
Emulation	3270/CICS to TN3270	PBX to IP PBX Digital to IP
Innovation	TN3270 to web	PBX to SIP ENUM



Telephony

- Cynic

  First we had H.323, then we had MGCP, then we had Megaco, Cisco's got SCCP, what a mess. This VoIP stuff is going to take years to get to the point it works well enough.

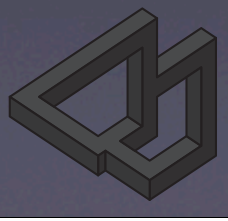
- Pragmatist

  I really like the consolidated network, but all my PBX features have to work. The phones have to work. Everything else is secondary.

- Wild-eyed Radical

  Uh, what's a phone?

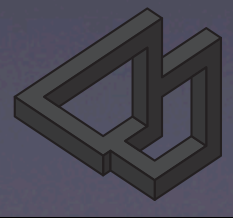
Cisco Systems



Consumer perspective

- Lift the receiver of what looks like a phone, and dial 112
  - Nowadays people know they should first dial, and then press *"a green button"*
- Does it matter if the "call" is over IP, or is a cellphone call or... ?

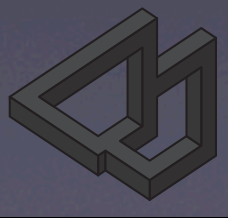
Cisco Systems



112 as one example

- How to know what number to dial?
- Where to route a call?
- How do the PSAP know where the call is from?
  - Dial back, block number, geographical location
- Across boundaries
  - Including country boundaries

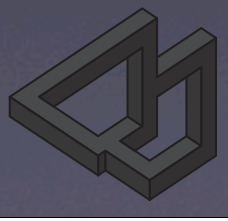
Cisco Systems



Sweden and 112

- Investigation about 112 to be initiated
  - How is 112 to work together with VoIP?
  - What is 112 in the future?

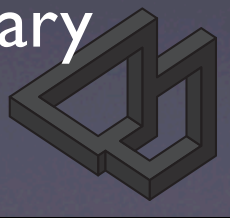
Cisco Systems

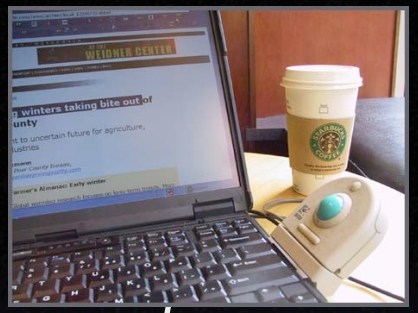


Roaming / mobility

- In many cases a mobile service is something one can access from a cellphone
- In the eyes of the Swedish government IT-bill, mobile service is something one can access from whatever device one want
  - This implies the user of the service choose how the user is accessed
  - Cellphone is one possible access mechanism among several complementary ones

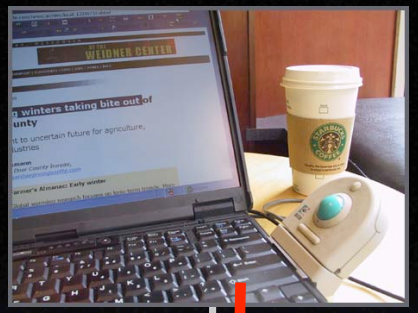
Cisco Systems

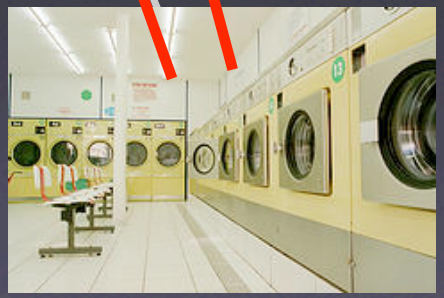




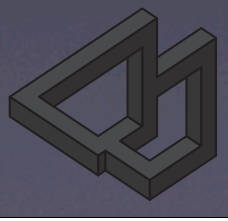
Access is needed from multiple locations

Cisco Systems





This implies access across multiple ISP's



Cisco Systems

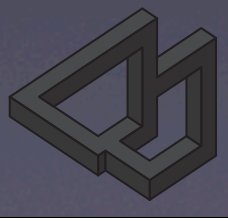
Convergence is more

Cisco Systems

Convergence is more

- http://www.rocketboom.com/
  - Amanda give daily news / videoblog
  - What's the difference from BBC World?
- What will the role be for production companies, TV stations and Cable companies?
- What is a journalist?

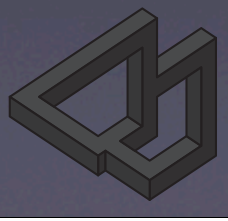
Cisco Systems



But today?

- ISP sell IP packets and services
- Bundling needed, and requested
  - Pay for IP packets? What is an IP packet?
  - One invoice please, and one customer service?
- What is difference between bundling and lock-in/out?

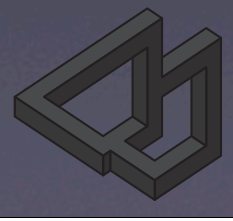
Cisco Systems



We need a vision!

- Where are we going?
- Short term goals are not the same as long term goals, remember we are living in a market economy
- Without knowing the goal, how do we measure if each step is in the right direction?

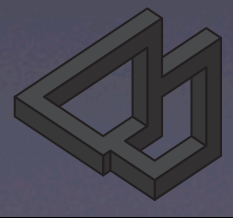
Cisco Systems



If you feel you have weird ideas, remember:

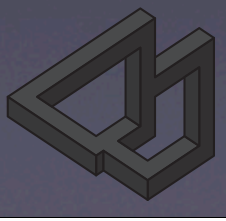
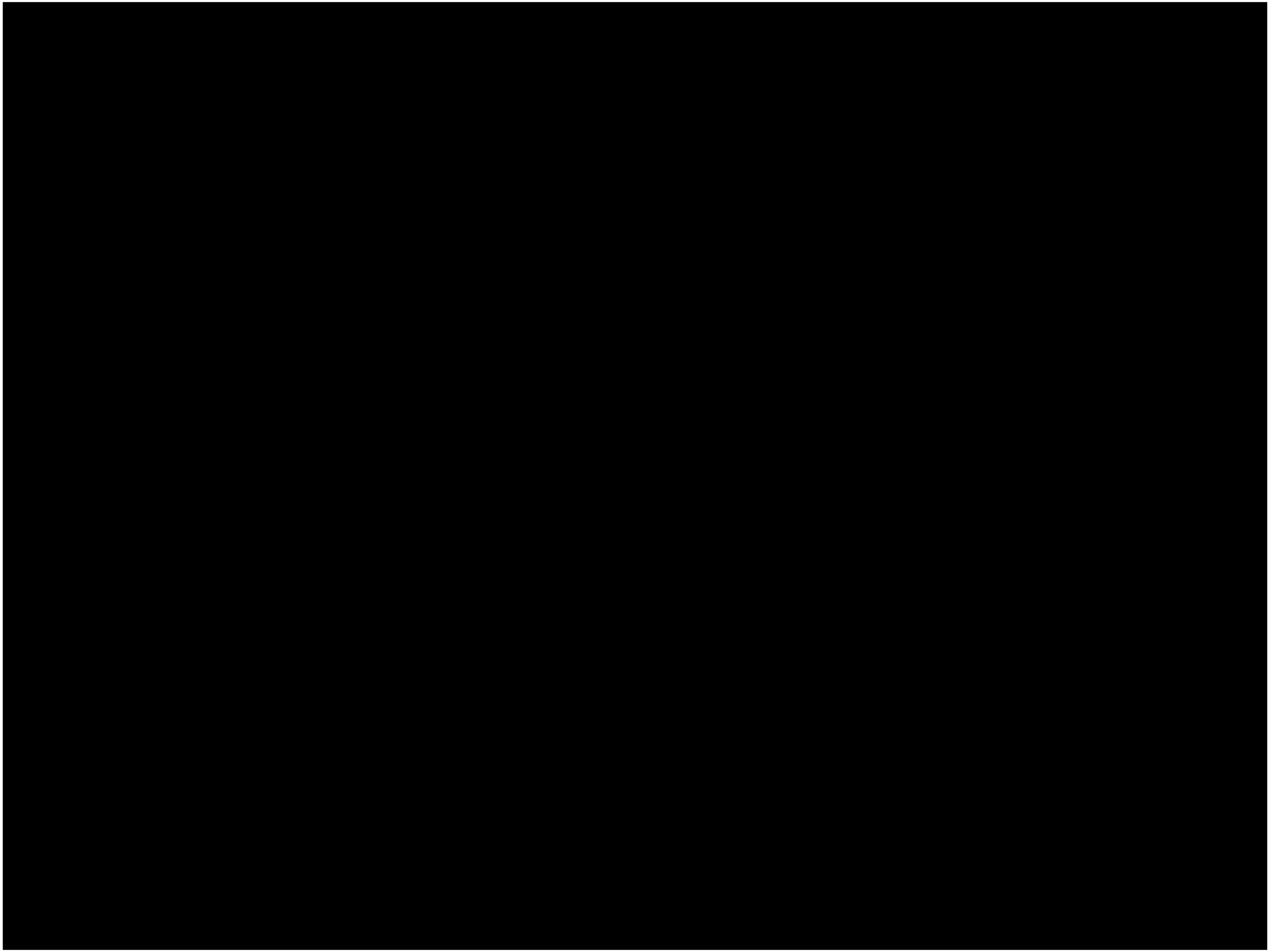
- Ideas don't fly regardless of how good they are if they are not presented correctly, and at the right point in time
- Be pessimistic when you plan revenue
- When you are frustrated, count to 7.5
- In theory there is no difference between theory and practice, but in practice there is
- Don't give up

Cisco Systems



Patrik Fältström

paf@cisco.com

paf@frobbit.se

Cisco Systems